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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,759	03/23/2004	Hartmut Angenendt	71310	2429
23872 7590 01/31/2007 MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227			EXAMINER ZANELLI, MICHAEL J	
			ART UNIT	PAPER NUMBER
			3661	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/31/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/806,759

Applicant(s)

ANGENENDT ET AL.

Examiner

Michael J. Zanelli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-16 is/are rejected.
- 7) ☒ Claim(s) 5-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The application filed 3/23/04 has been examined. Claims 1-16 are pending.
2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
3. The IDS filed 12/20/04 has been considered.
4. Claims 2, 3 and 7 are objected to because of the following informalities:
  - A. As per claim 2, line 1 is unclear as recited. The examiner suggests rewriting the claim as --wherein reference journeys are carried out for several predefined travel situations with which ...--.
  - B. As per claim 3, at line 1 change "at" to --during-- (note language used in claim 5).
  - C. As per claim 7, at line 1 change "at least of" to --of at least--.
5. Claims 4 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - A. As per claim 4, "the operator" lacks antecedence.
  - B. As per claim 15, the claim is unclear as to which structures form the "integral components". The use of the term "and/or" makes it unclear whether only one or more of the four listed elements may be present or merely the last element (the detection unit) is optional. If applicant's intent is that one or more of the listed elements is optional, the examiner suggest rewriting the claim as --wherein at least one of ... and ...--.
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-4 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diller at al. (5,487,002).

A. As per claims 1 and 11, Diller discloses a method and apparatus for determining residual travel duration for a battery operated vehicle in which the power consumption of the vehicle is recorded for an initial or reference journey to create a power consumption profile. Thereafter, when the vehicle travels the same journey, the power consumption profile is used in conjunction with current battery data to predict residual travel duration (Abs; col. 6, lines 58-64; col. 11, lines 26-64). Figs. 1 and 2 illustrate an exemplary device for carrying out the method including a processor-based micro-controller (12), display (44), input means (42) and detection unit (62). The micro-computer is programmed to perform the power consumption recording and computations which allow an operator to select a power consumption profile from a previous journey and to use the profile to determine residual travel duration information based thereon (col. 2, lines 35-

44; col. 6, lines 58-64). The claimed invention differs in that the method and apparatus are associated with a submarine whereas Diller appears to be concerned primarily with land vehicles. However, one of ordinary skill in the art would have found the general concept of using stored power consumption profiles from previous journeys to determine residual power consumption parameters for subsequent journeys applicable to any battery powered machine whereby power consumption was a concern. One of ordinary skill in the art would have looked to teachings of battery power consumption monitoring in other vehicle-related arts in attempting to solve a similar problem specifically related to marine vehicles such as a submarine.

B. As per claims 2 and 4, as above whereby a plurality of reference power consumption profiles may be stored and an operator selects the appropriate profile when the same journey is subsequently taken (col. 6, lines 58-64; col. 11, lines 26-64).

C. As per claim 3, as above whereby Diller suggests average values are computed since data is obtained over a measurement interval (col. 6, lines 2-13).

D. As per claims 12-14, as above whereby Fig. 2 shows interfaces for providing various information to the micro-controller (battery information, travel data, etc.). Of course one of ordinary skill in the art would have recognized that the input information would have been dependent on the type of vehicle concerned (i.e., land vehicle vs. water vehicle).

E. As per claims 15 and 16, as above whereby the integration of the various elements would have been dependent upon installation requirements. Diller suggests that various elements may or may not be integrated with other elements making up the device (col. 4,

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lines 20-26). Further, the micro-controller performs its processing based on executable software in memory (col. 3, lines 26-41).

8. Claims 5, 6 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 7 would be allowable if rewritten to overcome the objection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited documents are of general interest.

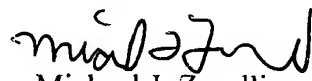
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (571) 272-6969.

The examiner can normally be reached on Monday-Thursday 9:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Zanelli  
Primary Examiner  
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/mjz